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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,583	12/05/2001	Ralf Bertram	DE920010035US1	3541
46583 7590 07/09/2007 GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			EXAMINER SHERR, CRISTINA O	
			ART UNIT 3621	PAPER NUMBER
			NOTIFICATION DATE 07/09/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/007,583	Applicant(s) BERTRAM ET AL.	
	Examiner Cristina Owen Sherr	Art Unit 3621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is in response to applicant's amendment filed April 11, 2007. Claims 1-19 are currently pending in this case.

Response to Arguments

2. Applicant's arguments filed April 11, 2007 have been fully considered but they are not persuasive. 3.

3. Applicant argues, with respect to claim 1, that nothing in the cited prior art teaches, discloses, or suggests "receiving a recommendation request comprising a selected item list from an advisee for a recommendation by a recommendation system".

4. Examiner respectfully disagrees and directs attention to Herz, wherein "For example, a user searching for information on a subject can write a short description of the desired information. The information retrieval computer generates an article profile for the request and then retrieves articles with profiles similar to the profile generated for the request. These requests can then be refined using "relevance feedback", where the user actively or passively rates the articles retrieved as to how close the information contained therein is to what is desired. The information retrieval computer then uses this relevance feedback information to refine the request profile and the process is repeated until the user either finds enough articles or tires of the search." (col 2 ln 66- col 3 ln 10). Obviously the user is making a request that is received by the information retrieval computer.

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5. Further in Herz, "Because people have multiple interests, a target profile interest summary for a single user must represent multiple areas of interest, for example, by consisting of a set of individual search profiles, each of which identifies one of the user's areas of interest. Each user is presented with those target objects whose profiles most closely match the user's interests as described by the user's target profile interest summary. Users' target profile interest summaries are automatically updated on a continuing basis to reflect each user's changing interests. In addition, target objects can be grouped into clusters based on their similarity to each other, for example, based on similarity of their topics in the case where the target objects are published articles, and menus automatically generated for each cluster of target objects to allow users to navigate throughout the clusters and manually locate target objects of interest. For reasons of confidentiality and privacy, a particular user may not wish to make public all of the interests recorded in the user's target profile interest summary, particularly when these interests are determined by the user's purchasing patterns. The user may desire that all or part of the target profile interest summary be kept confidential, such as information relating to the user's political, religious, financial or purchasing behavior; indeed, confidentiality with respect to purchasing behavior is the user's legal right in many states. It is therefore necessary that data in a user's target profile interest summary be protected from unwanted disclosure except with the user's agreement. At the same time, the user's target profile interest summaries must be accessible to the relevant servers that perform the matching of target objects to the users, if the benefit of

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this matching is desired by both providers and consumers of the target objects.

The disclosed system provides a solution to the privacy problem by using a proxy server that acts as an intermediary between the information provider and the user. The proxy server dissociates the user's true identity from the pseudonym by the use of cryptographic techniques. The proxy server also permits users to control access to their target profile interest summaries and/or user profiles, including provision of this information to marketers and advertisers if they so desire, possibly in exchange for cash or other considerations. Marketers may purchase these profiles in order to target advertisements to particular users, or they may purchase partial user profiles, which do not include enough information to identify the individual users in question, in order to carry out standard kinds of demographic analysis and market research on the resulting database of partial user profiles. Pseudonymous control of an information server suggests how a special discount can be issued to a user's pseudonym and that such a digital credential is provided to the user as a result of his/her user profile making him/her eligible. The user may thus present this type of credential to the appropriate vendor to take advantage of the discount. This technique can be extended also to smart cards wherein the digital credential providing the discount is downloaded from the client to the smart card and upon presentation, the vendor may if desired, delete the credential upon redemption by the user. These discount credentials may similarly include any of the discount types (customized promotions) herein disclosed wherein each purchase may identified

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(characterized) and credentialized by the vendor onto the user's smart card and/or the vendor's system." (col 5 ln 21- col 6 ln 15).

6. Note also in Herz wherein "Relevant definitions of terms for the purpose of this description include: (a.) an object available for access by the user, which may be either physical or electronic in nature, is termed a "target object", (b.) a digitally represented profile indicating that target object's attributes is termed a "target profile", (c.) the user looking for the target object is termed a "user", (d.) a profile holding that user's attributes, including age/zip code/etc. is termed a "user profile", (e.) a summary of digital profiles of target objects that a user likes and/or dislikes, is termed the "target profile interest summary" of that user, (f.) a profile consisting of a collection of attributes, such that a user likes target objects whose profiles are similar to this collection of attributes, is termed a "search profile" or in some contexts a "query" or "query profile," (g.) a specific embodiment of the target profile interest summary which comprises a set of search profiles is termed the "search profile set" of a user, (h.) a collection of target objects with similar profiles, is termed a "cluster," (i.) an aggregate profile formed by averaging the attributes of all target objects in a cluster, termed a "cluster profile," (j.) a real number determined by calculating the statistical variance of the profiles of all target objects in a cluster, is termed a "cluster variance," (k.) a real number determined by calculating the maximum distance between the profiles of any two target objects in a cluster, is termed a "cluster diameter." (col 4 ln 48-col 5 ln 5).

7. Applicant argues, with respect to claim 7, that nothing in the cited prior art teaches, discloses, or suggests "a user profile for a recommendation system,

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comprising a plurality of records, each record including a user identifier, an item identifier, and a rating value, wherein each record is linked in a first and a second dimension, the first dimension linking records with a same user identifier in a sequence according to the item identifier, and the second dimension linking records with a same item identifier in a sequence according to the user identifier".

8. Examiner respectfully disagrees and directs attention to Herz, wherein "Relevant definitions of terms for the purpose of this description include: (a.) an object available for access by the user, which may be either physical or electronic in nature, is termed a "target object", (b.) a digitally represented profile indicating that target object's attributes is termed a "target profile", (c.) the user looking for the target object is termed a "user", (d.) a profile holding that user's attributes, including age/zip code/etc. is termed a "user profile", (e.) a summary of digital profiles of target objects that a user likes and/or dislikes, is termed the "target profile interest summary" of that user, (f.) a profile consisting of a collection of attributes, such that a user likes target objects whose profiles are similar to this collection of attributes, is termed a "search profile" or in some contexts a "query" or "query profile," (g.) a specific embodiment of the target profile interest summary which comprises a set of search profiles is termed the "search profile set" of a user, (h.) a collection of target objects with similar profiles, is termed a "cluster," (i.) an aggregate profile formed by averaging the attributes of all target objects in a cluster, termed a "cluster profile," (j.) a real number determined by calculating the statistical variance of the profiles of all target objects in a cluster, is termed a "cluster variance," (k.) a real number

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determined by calculating the maximum distance between the profiles of any two target objects in a cluster, is termed a "cluster diameter." (col 4 ln 48-col 5 ln 5).

9. Applicant argues, with respect to claim 8, that nothing in the cited prior art teaches, discloses, or suggests "selecting a first set of users from a group of users of the recommendation system based on the selected item list and selecting neighboring users from the first set of users based on similarities between the advisee and each member of the first set of users."

10. Examiner respectfully disagrees and directs attention to Herz, wherein "Relevant definitions of terms for the purpose of this description include: (a.) an object available for access by the user, which may be either physical or electronic in nature, is termed a "target object", (b.) a digitally represented profile indicating that target object's attributes is termed a "target profile", (c.) the user looking for the target object is termed a "user", (d.) a profile holding that user's attributes, including age/zip code/etc. is termed a "user profile", (e.) a summary of digital profiles of target objects that a user likes and/or dislikes, is termed the "target profile interest summary" of that user, (f.) a profile consisting of a collection of attributes, such that a user likes target objects whose profiles are similar to this collection of attributes, is termed a "search profile" or in some contexts a "query" or "query profile," (g.) a specific embodiment of the target profile interest summary which comprises a set of search profiles is termed the "search profile set" of a user, (h.) a collection of target objects with similar profiles, is termed a "cluster," (i.) an aggregate profile formed by averaging the attributes of all target objects in a cluster, termed a "cluster profile," (j.) a real

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number determined by calculating the statistical variance of the profiles of all target objects in a cluster, is termed a "cluster variance," (k.) a real number determined by calculating the maximum distance between the profiles of any two target objects in a cluster, is termed a "cluster diameter." (col 4 ln 48-col 5 ln 5).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herz (US 6,029,195).

13. Regarding claim 1 –

Herz discloses a computerized method for generating a recommendation of an item to an advisee, comprising the steps of: receiving a recommendation request comprising a selected item list from an advisee for a recommendation by a recommendation system (e.g. col 25 ln 46-62, col 3 ln 1-10); (note that if a user is requesting a recommendation, the recommendation must somehow be received, and that no one asks for a recommendation in a vacuum, but rather asks for a recommendation on a type or list of items, such as apples, history books, or romantic movies);

in response to the recommendation request, computing a plurality of similarity factors based on at least one advisee profile from at least one newly rated item

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and determining which at least one user has already rated the item, wherein the advisee profile comprising a plurality of records, each record including a user identifier, an item identifier, and a rating value, such that each record is linked in a first and a second dimension (e.g. col 3 ln 7-10);

and items from the selected item list that indicate similarity between the advisee and a plurality of users of the recommendation system who have previously provided ratings of items from the selected item list (e.g. col 3 ln 1-3, col 6 ln 38-45)

selecting, from the plurality of users of the recommendation system, neighboring users to the advisee, according to the similarity factors (e.g. col 12 ln 25-27, col 20 ln 1-22);

generating a recommendation of at least one item of the selected item list items, according to the previously provided ratings of the at least one item plurality of items by the neighboring users (e.g. col 70 ln 1-7).

14. Herz does not utilize identical terminology with respect to the instant case, referring to shopping cart, for example and maps of similar items, and only one aspect or embodiment of Herz is thus a computer-implemented method of recommending items to a user. However, it would be obvious to one of ordinary skill in the art to adapt the invention in Herz for the uses in the instant invention in order to facilitate sales.

15. Regarding claim 2 –

Herz discloses the method of claim 1, wherein all items upon which the step of computing depends are included in the selected item list (e.g. col 16 ln 34-48).

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16. Regarding claim 3 –

Herz discloses the method of claim 2, wherein the recommendation of at least one item includes only items that are included in the selected item list (e.g. col 26 ln 22-45).

17. Regarding claim 4 –

Herz discloses the method of claim 1, wherein the step of selecting neighboring users excludes, any user whose similarity with the advisee is below a predetermined threshold (e.g. col 88 ln 8 - 37).

18. Regarding claim 5 –

Herz discloses the method of claim 1, wherein the step of computing and the step of selecting are executed substantially in parallel by inserting each newly computed similarity factor into a neighbor list in decreasing order of similarity and by limiting length of the neighbor list by excluding a user with lowest similarity if otherwise the neighbor list would exceed a predetermined length (e.g. col 18 ln 5-8).

19. Regarding claim 6 –

Herz discloses the method of claim 1, further including the step of caching identifiers of the neighboring users, associated similarity factors, and time stamps (e.g. col 5 ln 55-57). Although Herz does not utilize exactly the same criteria for filtering out users as in the instant case, it would be obvious to one of ordinary skill in the art to adapt Herz by merely choosing different criteria or characteristics.

20. Regarding claim 7 –

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Herz discloses a user profile for a recommendation system, comprising a plurality of records, each record including a user identifier, an item identifier, and a rating value, wherein each record is linked in a first and a second dimension, the first dimension linking records with a same user identifier in a sequence according to the item identifier, and the second dimension linking records with a same item identifier in a sequence according to the user identifier (e.g. col 39 ln 12-22, col 39 ln 1-11).

21. As above, Herz does not utilize identical terminology with respect to the instant case, referring to shopping cart, for example and maps of similar items, and only one aspect or embodiment of Herz is thus a computer-implemented method of recommending items to a user. However, it would be obvious to one of ordinary skill in the art to adapt the invention in Herz for the uses in the instant invention in order to facilitate sales.

22. Regarding claim 8-19 –

Claims 8-19 are rejected under the same criteria as above.

23. Examiner's note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may be applied as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

25. Linden et al (US 6,266,649) disclose collaborative recommendations using item-to-item similarity mappings.

26. Smith et al (US 6,853,982) discloses content personalization based on actions performed during a current browsing session.

27. Petra et al (US 2004/0205065) discloses a system for creating and maintaining a database of information utilizing user opinions.

28. Linden et al (US 6,912,505) discloses use of product viewing histories of users to identify related products.

29. Petras et al (US 2001/0047290) discloses a system for creating and maintaining a database of information utilizing user opinions.

30. Amazon.com catapults electronic commerce to next level with powerful new features (Amazon News release, Sept. 23, 1997).

31. Epinions.com buying guide.

32. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

33. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory

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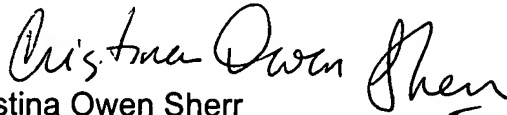
action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cristina Owen Sherr whose telephone number is 571- 272-6711. The examiner can normally be reached on 8:30-5:00 Monday through Friday.

35. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew J. Fischer can be reached on 571-272-6779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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36. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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